

PENDING CLAIMS

1. **(Previously presented)** A method for evaluating the morphogenic activity of a candidate morphogenic protein or analog thereof, comprising:
 - (a) creating a local defect site in a mammal accessible to progenitor cells,
 - (b) administering said candidate morphogenic protein or analog thereof systemically to said mammal at a site distal from the local defect site,
 - (c) measuring the ability of said candidate morphogenic protein or analog thereof to induce new tissue formation at said defect site, and
 - (d) comparing the ability of said candidate morphogenic protein or analog thereof with the ability of a control to perform the same function,wherein said local defect site is in renal, skeletal, lung, cardiac, liver, pancreas, uterine, ovarian, gastrointestinal, colon, dermal, osteochondral, chondral, or thyroid tissue.
2. **(Canceled)**
3. **(Currently amended)** A method for evaluating an optimal dosage of a candidate morphogenic protein or analog thereof for administering to a mammal, comprising:
 - (a) creating a local defect site in a mammal accessible to progenitor cells,
 - (b) administering said candidate morphogenic protein or analog thereof systemically to said mammal at a site distal from the local ~~permissive~~ defect site,
 - (c) measuring the ability of candidate morphogenic protein or analog thereof to induce new tissue formation at said defect site, and
 - (d) comparing the ability of said candidate morphogenic protein or analog thereof with the ability of a control to perform the same function,wherein said local defect site is in renal, skeletal, lung, cardiac, liver, pancreas, uterine, ovarian, gastrointestinal, colon, dermal, osteochondral, chondral, or thyroid tissue.
4. **(Canceled)**
5. **(Withdrawn)** The method of claim 1 or 3, wherein said non-neuronal defect site occurs in skeletal, lung, cardiac, liver, pancreas, uterine, ovarian, gastrointestinal, colon, dermal, oral mucosa, osteochondral, chondral, or thyroid tissue.

6. **(Previously presented)** The method of claim 1 or 3, wherein said defect site occurs in renal tissue.
7. **(Withdrawn)** The method of claim 1 or 3, wherein said defect site occurs in dental or periodontal tissue.
8. **(Previously presented)** The method of claim 1 or 3, wherein said mammal is aged.
9. **(Previously presented)** The method of claim 1 or 3, wherein said mammal has a reduced capacity to induce callus formation.
10. **(Previously presented)** The method of claim 1 or 3, wherein said mammal is afflicted with impaired blood flow to the skeletal extremities.
11. **(Previously presented)** The method of claim 1 or 3, wherein said mammal has a reduced capacity to induce an endogenous morphogenic signal.
12. **(Previously presented)** The method of claim 1 or 3, wherein said morphogenic protein or analog thereof is administered parenterally.
13. **(Previously presented)** The method of claim 12, wherein said morphogenic protein or analog thereof is administered intravenously.
14. **(Previously presented)** The method of claim 1 or 3, wherein said morphogenic protein or analog thereof is administered orally.
15. **(Previously presented)** The method of claim 1, wherein said morphogenic protein or analog thereof is administered to said mammal at a time when mesenchymal progenitor cells are accessible to said local defect site.
16. **(Previously presented)** The method of claim 1 or 3, wherein said morphogenic protein or analog thereof is administered at least six hours after the creation of said local defect site.
17. **(Previously presented)** The method of claim 1, wherein said morphogenic protein or analog thereof is administered at least 24 hours after the creation of said local defect site.

18. **(Previously presented)** The method of claim 1, wherein said morphogenic protein or analog thereof is administered at least 72 hours after the creation of said local defect site.
19. **(Previously presented)** The method of claim 1 or 3, wherein said morphogenic protein or analog thereof is administered to said mammal after the initiation of fibrosis at said local defect site.
20. **(Previously presented)** The method of claim 1 or 3, wherein said morphogenic protein or analog thereof is administered in aqueous solution.
21. **(Previously presented)** The method of claim 8, wherein said mammal is a steroidal drug user.
22. **(Previously presented)** The method of claim 8, wherein said mammal is aged, obese, hypertensive, or afflicted with osteopenia or diabetes.
23. **(Previously presented)** The method of claim 1 or 3, wherein said morphogenic protein is a morphogenically active amino acid sequence variant of a morphogen selected from: OP1, OP2, OP3, BMP2, BMP3, BMP4, BMP5, BMP6, BMP9, BMP-10, BMP-11, BMP-12, BMP-15, BMP-3b, DPP, Vg1, Vgr-1, 60A protein, GDF-1, GDF-3, GDF-5, GDF-6, GDF-7, GDF-8, GDF-9, GDF-10, or GDF-11.
24. **(Previously presented)** The method of claim 23, wherein said morphogen is selected from: OP1, OP2, BMP2, BMP4, BMP5, or BMP6.
25. **(Previously presented)** The method of claim 1 or 3, wherein said morphogenic protein is a morphogenically active amino acid sequence variant of a morphogen comprising an amino acid sequence having at least 70% homology within the C-terminal 106 amino acids, including the conserved seven cysteine domain, of human OP1.
26. **(Previously presented)** The method of claim 1 or 3, wherein said morphogenic protein is OP1.
27. **(Previously presented)** The method of claim 1 or 3, wherein said morphogenic protein is mature OP1 solubilized in a saline solution.

28. **(Previously presented)** The method of claim 1 or 3, wherein said morphogenic protein comprises an amino acid sequence defined by OPX (SEQ ID No. 3); Generic Sequence 6 (SEQ ID No. 4), Generic Sequence 7 (SEQ ID No. 5); Generic Sequence 8 (SEQ ID No. 6); or Generic Sequence 9 (SEQ ID No. 7).
29. **(Withdrawn)** A method for inducing new tissue formation at a nonskeletal defect locus in a mammal, comprising administering morphogenic protein systemically to said mammal.
- 30-75. **(Canceled)**
76. **(Withdrawn)** A method for inducing bone or cartilage formation at a defect locus in a mammal, comprising administering osteogenic protein systemically to said mammal.
- 77-122. **(Canceled)**
123. **(New)** The method of claim 3, wherein the local defect site is a permissive defect site.